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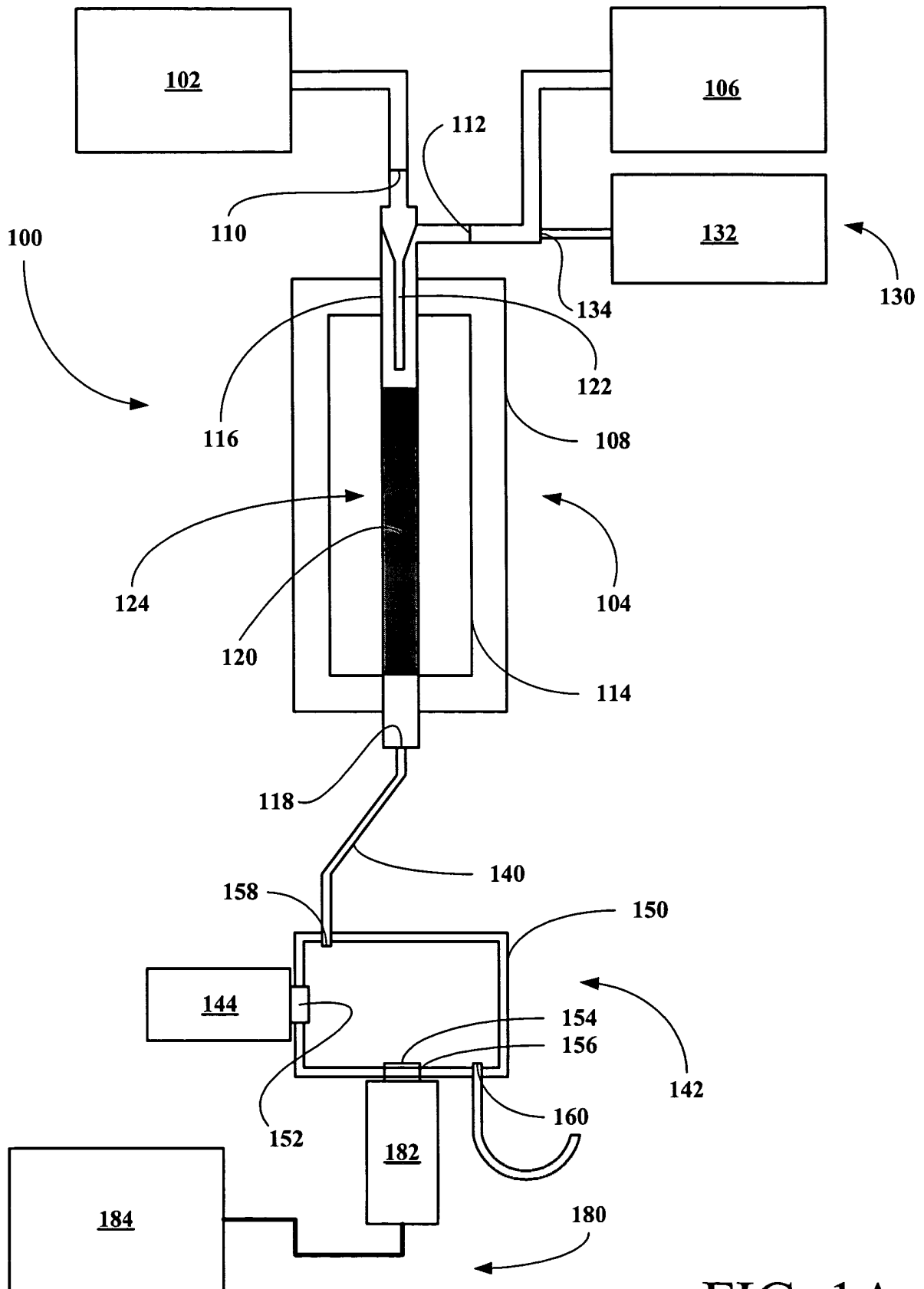


FIG. 1A

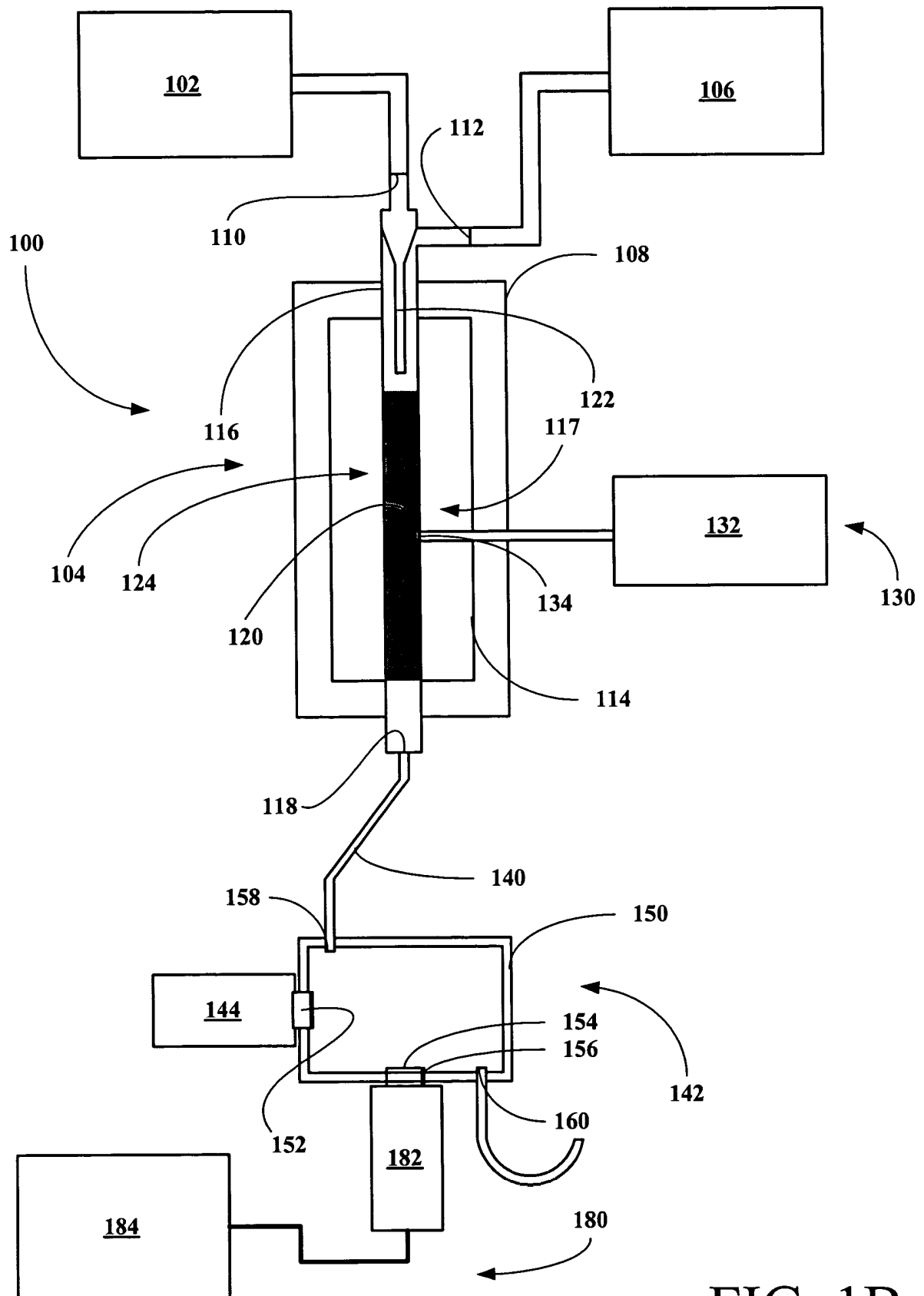


FIG. 1B

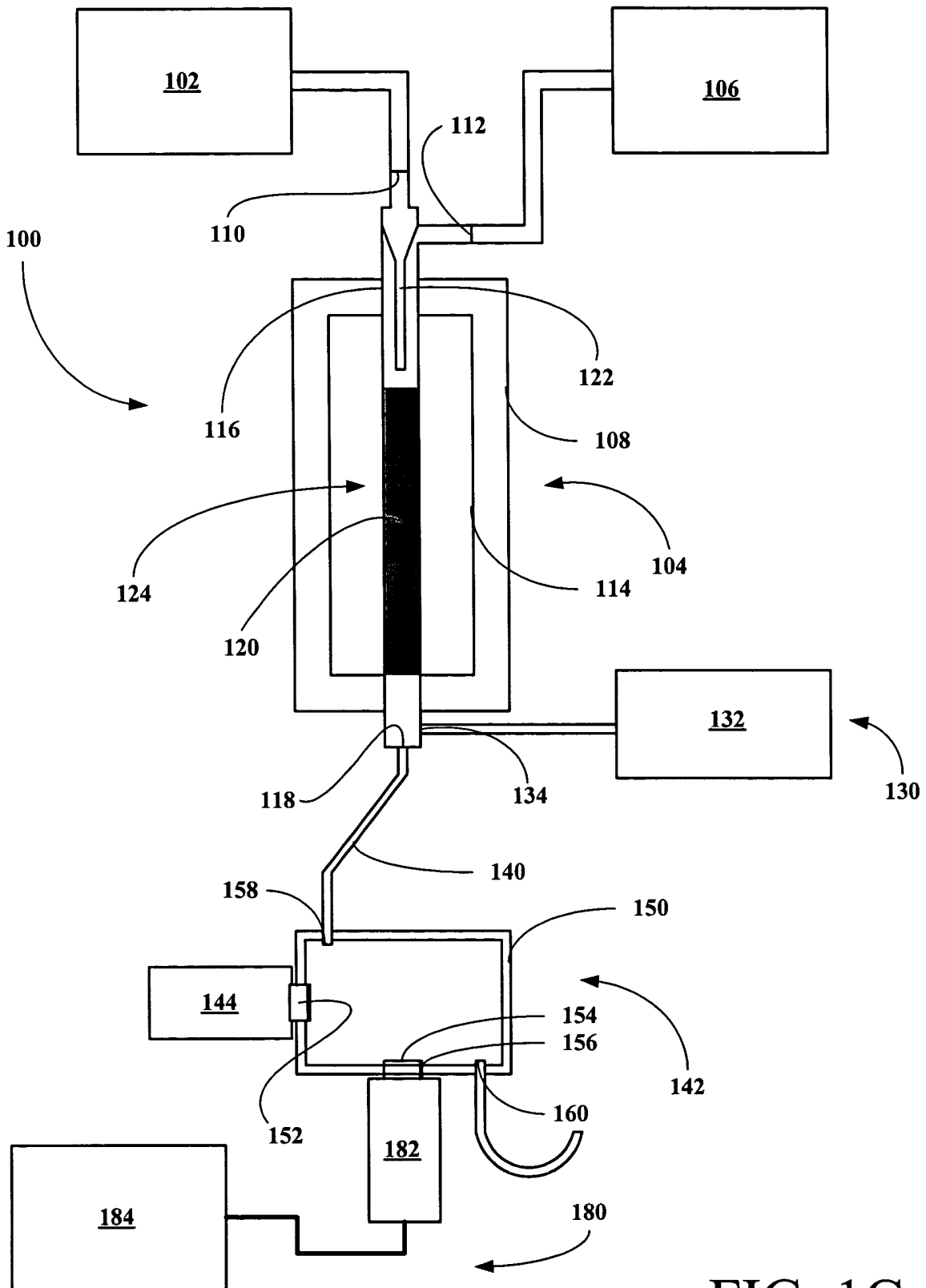


FIG. 1C

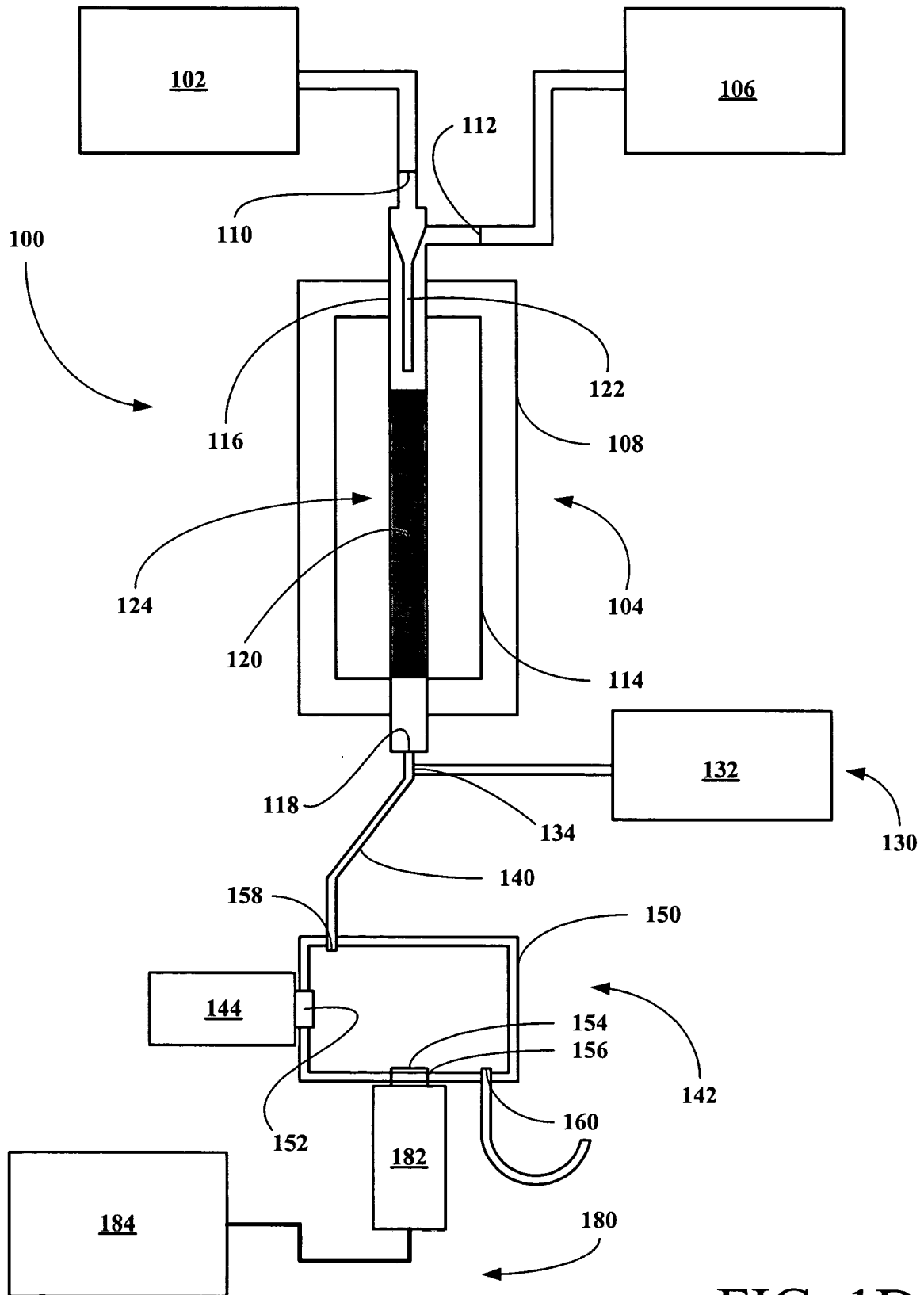


FIG. 1D

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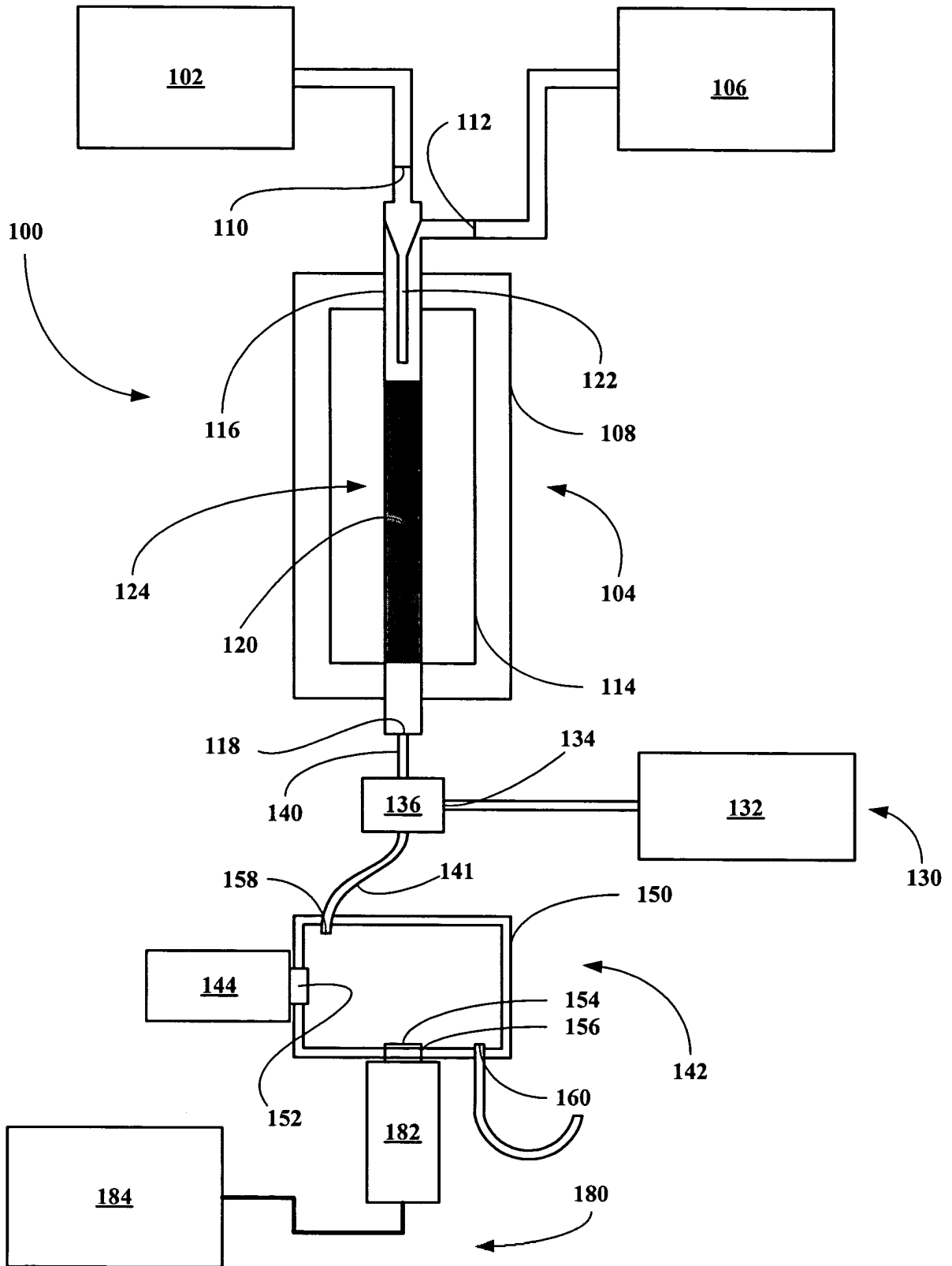


FIG. 1E

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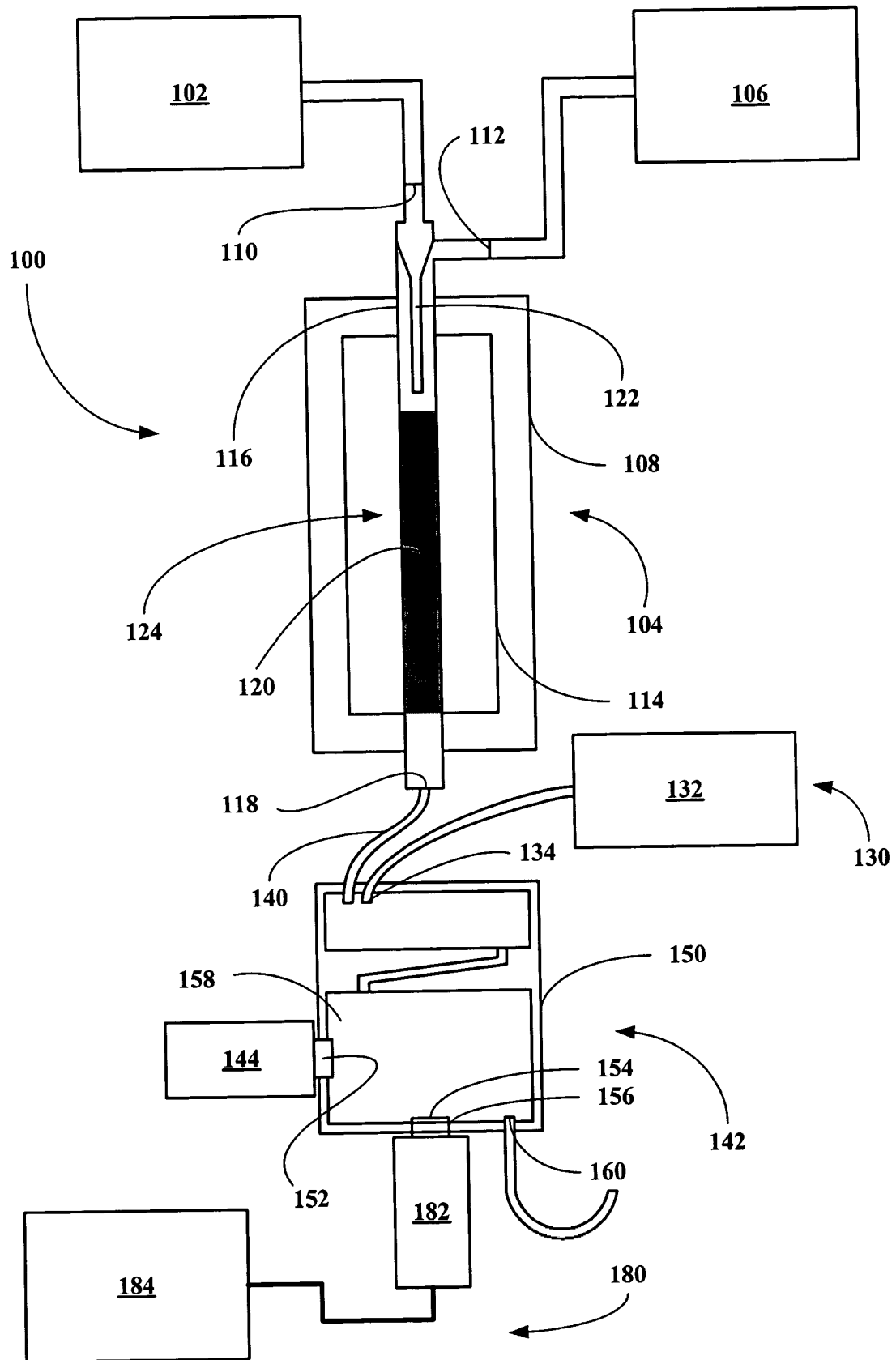


FIG. 1F

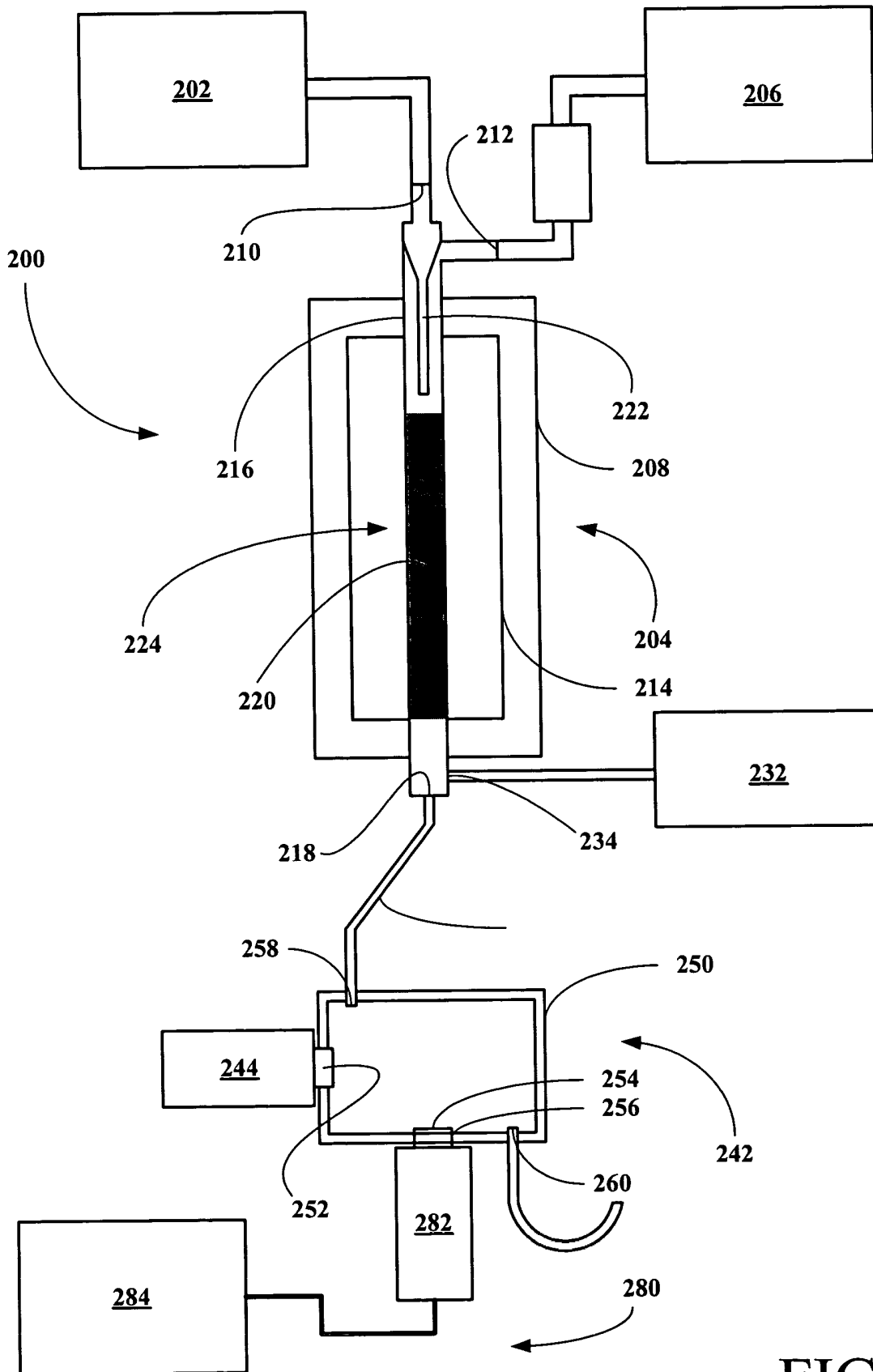


FIG. 2

8116

Alcohol "Blanks" vs. Response or "Background" Counts

Note: Customer Data

Injection Comparison Plot

30 μ l, 2.2 μ l/s, $T_p = 1075^\circ$
 $V = 280$

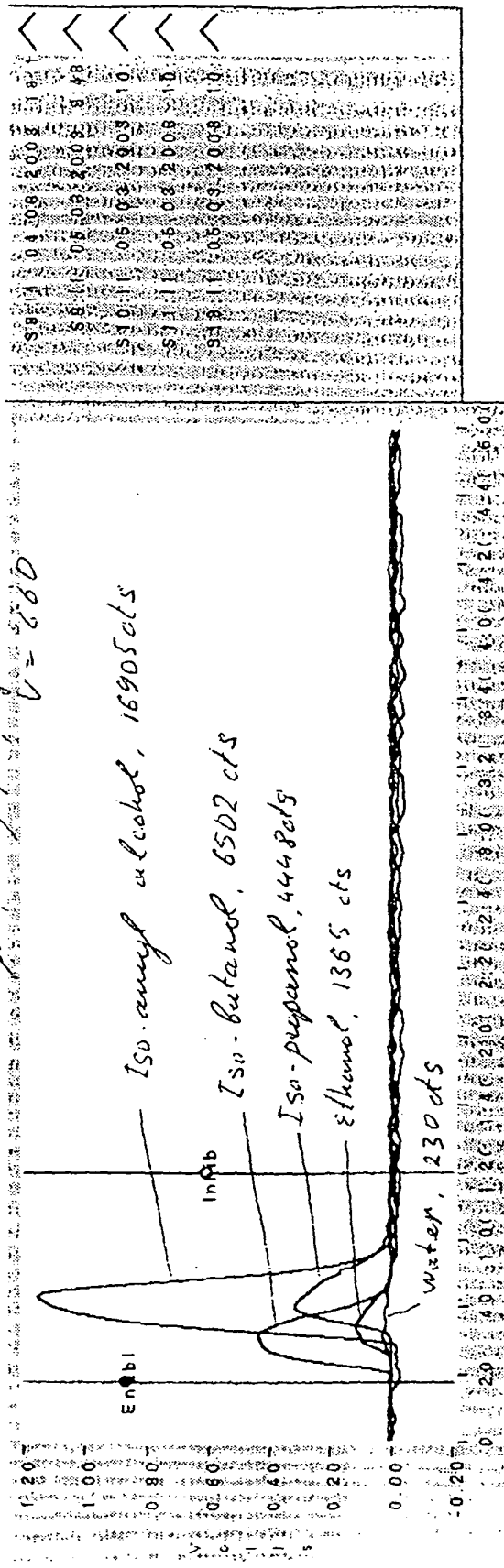
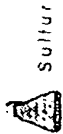


FIG. 3

9116

File Name: Soctrade.sam
 Curr. Cal. File: As2551.cal
 Orig. Cal. File: As2551.cal
 Calibration based on: Total Counts
 Blank Correction Is: OFF

Comments: Test UV Fluorescence Detector for Soctrade

Version: 3.7.7 6/28/02

Name	Use S	SConc	SCnts	S%RSD	Divider	Multiplier	Time	Date	OpID	Tray #	Vial Pos
1ppm/l-C8	X	0.629	23742.3	1.19			2:13 PM	3/11/03	LJN	1	1
1ppm/l-C8.1	X	0.627	23690.0		1.00	1.00	2:19 PM	3/11/03	LJN		
1ppm/l-C8.2	X	0.645	24202.4		1.00	1.00	2:25 PM	3/11/03	LJN		
1ppm/l-C8.3	X	0.618	23430.0		1.00	1.00	2:31 PM	3/11/03	LJN		
1ppm/l-C8.4	X	0.628	23729.2		1.00	1.00	2:37 PM	3/11/03	LJN		
1ppm/l-C8.5	X	0.626	23660.1		1.00	1.00				1	1
Blank/C8	X	-0.151	1465.7	15.40							
Blank/l-C8.1	X	-0.148	1561.1		1.00	1.00	2:44 PM	3/11/03	LJN		
Blank/l-C8.2	X	-0.150	1512.4		1.00	1.00	2:50 PM	3/11/03	LJN		
Blank/l-C8.3	X	-0.141	1768.8		1.00	1.00	2:56 PM	3/11/03	LJN		
Blank/l-C8.4	X	-0.160	1214.1		1.00	1.00	3:02 PM	3/11/03	LJN		
Blank/l-C8.5	X	-0.158	1272.2		1.00	1.00	3:08 PM	3/11/03	LJN		
500ppmN-DI	X	0.744	27020.0	NA	1.00	1.00	3:16 PM	3/11/03	LJN	1	1
I-C3OH	X	-0.173	852.5	NA	1.00	1.00	3:39 PM	3/11/03	LJN	1	1
Toluene	X	-0.120	2359.6	NA	1.00	1.00	4:15 PM	3/11/03	LJN	1	1
MeOH	X	-0.190	350.5	NA	1.00	1.00	4:48 PM	3/11/03	LJN	1	1

FIG. 4

10116

Blank i-C8 Samples vs. N2 Added to Injector Gas Flow

Injection Comparison Plot

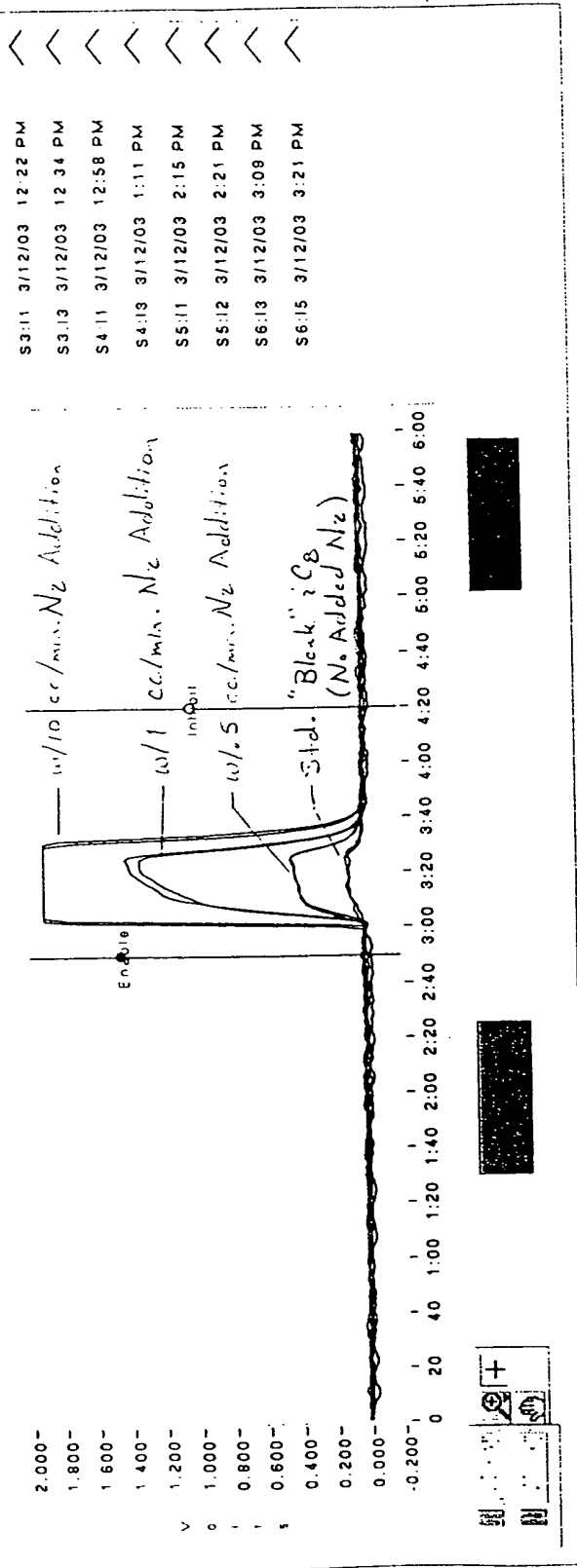
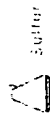


FIG. 5

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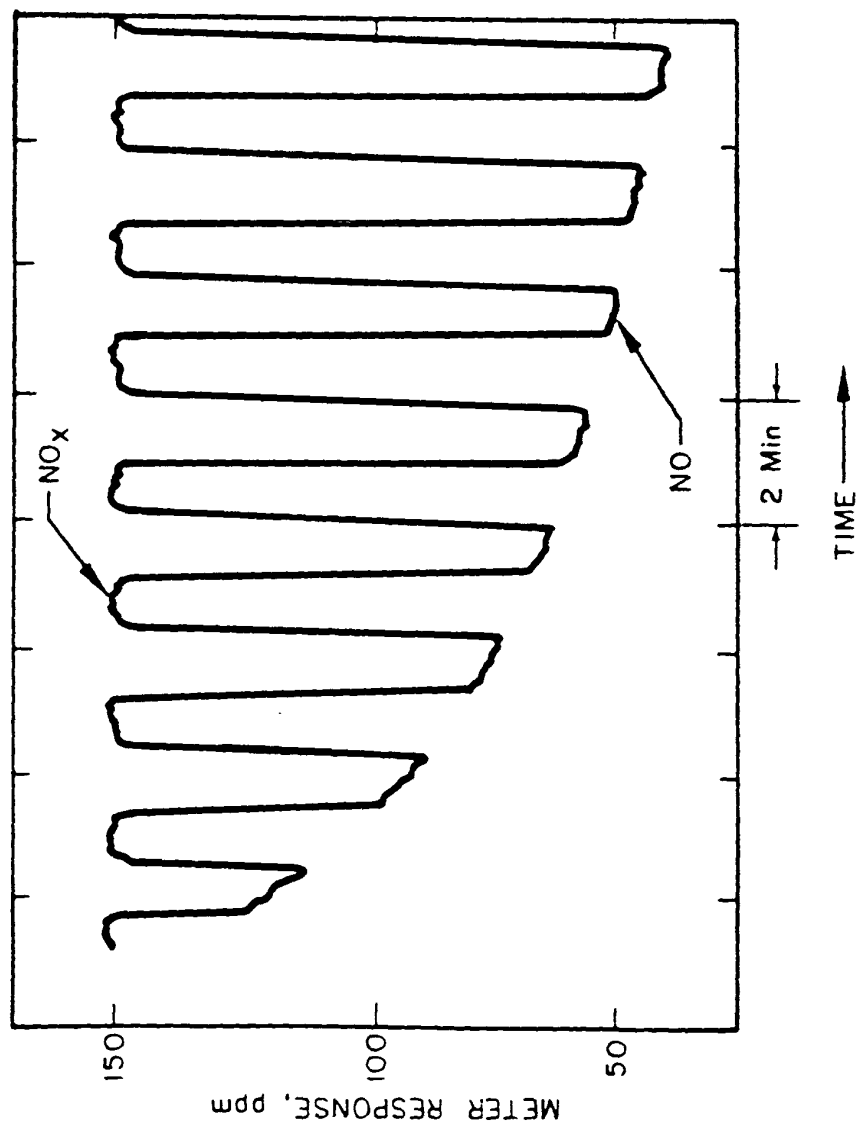
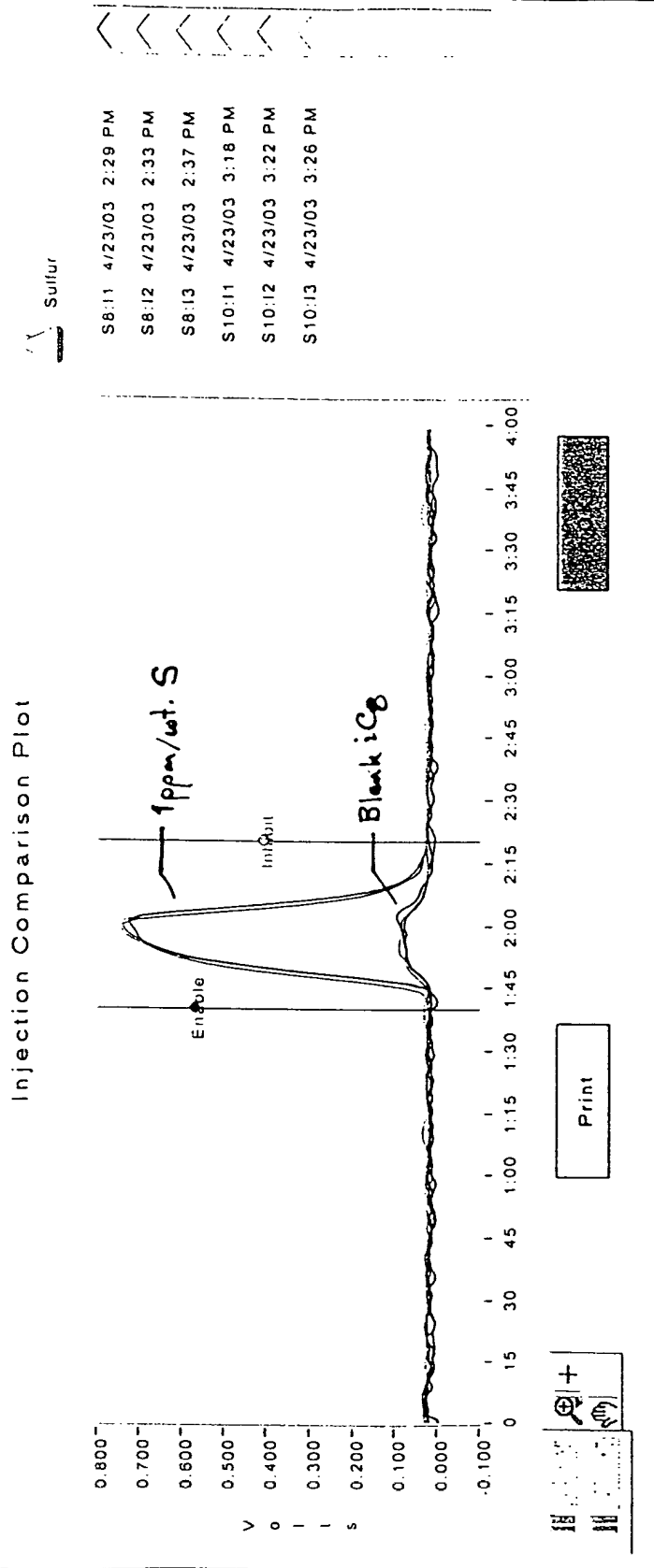


FIG. 1. Test of NO_2 converter efficiency. Monitor operated alternately in the NO_x and NO modes. The NO_x response remains constant with time, while that for NO decreases with time. From AeroChem. (39)

FIG. 6

12/16

Relative Response of "Blank" i-C₈ vs. 1ppm/wt. S in i-C₈ w/ Present UV Fluorescence Configuration



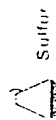
Sample Size: 80μl
 Injection Rate: 5μl/sec.
 Combustion Tube: Single Pass
 Combustion Gas Flows: MFC 2; O₂ @ 50cc/min
 MFC 3; O₂ @ 425cc/min.
 PMT Voltage: -700vdc
 Gain: High x 25

FIG. 7A

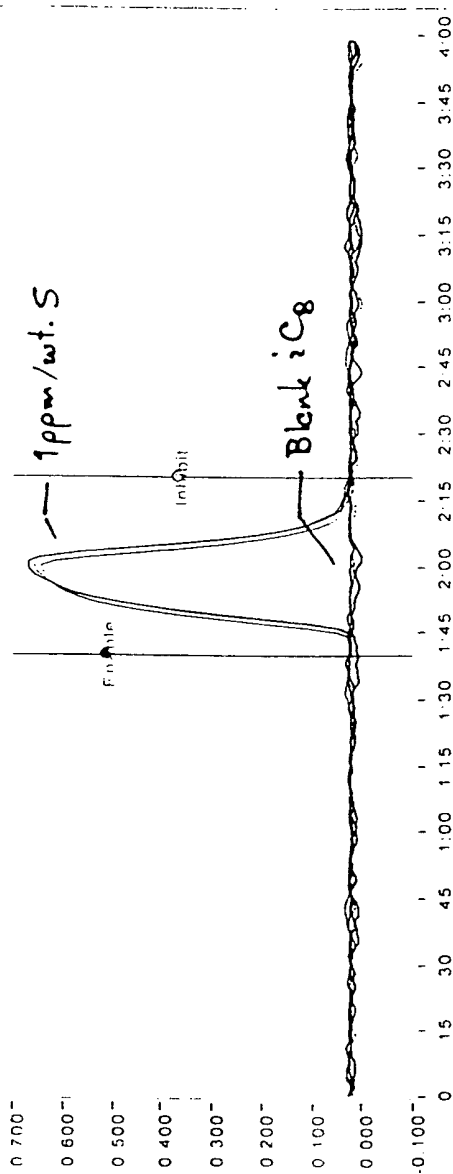
13116

Relative Response of "Blank i-C8 vs. 1 ppm/wt. S in i-C8 w/ Ozone Addition

Injection Comparison Plot



S4:11	4/23/03	12:24 PM
S4:12	4/23/03	12:28 PM
S4:13	4/23/03	12:32 PM
S6:11	4/23/03	1:21 PM
S6:12	4/23/03	1:25 PM
S6:13	4/23/03	1:29 PM



Print

FIG. 7B

Analytical Conditions
Same as Figure 5a
(+) Ozone Addition @ Fluorescence Cell Inlet

1416

File Name: O3 addition.sam
 Curr. Cal. File: Interference.cal
 Orig. Cal. File: Interference.cal
 Calibration based on: Total Counts
 Blank Correction is: OFF

Comments: All Ozone (O3) Addition = 1cc/min O2 with ATOMIC Prototype
 (Hv Transformer Primary @7vdc)
 All 50ppbS standards in Fisher i-C8

Version: 3.7.7 6/28/02

Name	Use S	SConc	SCnts	SSDev	%RSD	Divider	Multiplier	Time	Date
Reidel +O3	X	NaN	16.6	15.77	95.12				
Reidel+O3.1	X	Inf	37.6			1.00	1.00	11:08 AM	4/23/03
Reidel+O3.2	X	Inf	12.2			1.00	1.00	11:12 AM	4/23/03
Reidel+O3.3	X	Inf	28.1			1.00	1.00	11:16 AM	4/23/03
Reidel+O3.4	X	-Inf	0.9			1.00	1.00	11:20 AM	4/23/03
Reidel+O3.5	X	-Inf	4.2			1.00	1.00	11:24 AM	4/23/03
50ppb+O3	X	Inf	355.9	81.09	22.79				
50ppt : O3.1	X	Inf	429.9			1.00	1.00	11:29 AM	4/23/03
50ppb+O3.2	X	Inf	442.9			1.00	1.00	11:33 AM	4/23/03
50ppb+O3.3	X	Inf	287.1			1.00	1.00	11:37 AM	4/23/03
50ppb+O3.4	X	Inf	263.5			1.00	1.00	11:41 AM	4/23/03
50ppb+O3.5	X	Inf	355.9			1.00	1.00	11:45 AM	4/23/03
Reidel+O3	X	NaN	5.6	5.49	97.56				
Reidel+O3.1	X	-Inf	0.0			1.00	1.00	12:03 PM	4/23/03
Reidel+O3.2	X	-Inf	6.4			1.00	1.00	12:07 PM	4/23/03
Reidel+O3.3	X	-Inf	5.1			1.00	1.00	12:11 PM	4/23/03
Reidel+O3.4	X	-Inf	2.2			1.00	1.00	12:15 PM	4/23/03
Reidel+O3.5	X	Inf	14.4			1.00	1.00	12:19 PM	4/23/03
Fisher+O3	X	NaN	18.3	15.49	84.65				
Fisher+O3.1	X	Inf	28.6			1.00	1.00	12:24 PM	4/23/03
Fisher+O3.2	X	-Inf	4.3			1.00	1.00	12:28 PM	4/23/03

FIG. 8A

15/16

Name	Use S	SConc	SCrits	SSDev	%RSD	Divider	Multiplier	Time	Date
Fisher+O3.3	X	-Inf	0.0			1.00	1.00	12:32 PM	4/23/03
Fisher+O3.4	X	Inf	35.6			1.00	1.00	12:36 PM	4/23/03
Fisher+O3.5	X	Inf	23.0			1.00	1.00	12:40 PM	4/23/03
50ppb+O3.3	X	Inf	352.9	46.42	13.16				
50ppb+O3.1	X	Inf	313.8			1.00	1.00	12:45 PM	4/23/03
50ppb+O3.2	X	Inf	317.1			1.00	1.00	12:49 PM	4/23/03
50ppb+O3.3	X	Inf	337.3			1.00	1.00	12:53 PM	4/23/03
50ppb+O3.4	X	Inf	370.6			1.00	1.00	12:57 PM	4/23/03
50ppb+O3.5	X	Inf	425.4			1.00	1.00	1:01 PM	4/23/03
1ppm+O3.3	X	Inf	9816.3	118.67	1.21				
1ppm+O3.1	X	Inf	9657.6			1.00	1.00	1:21 PM	4/23/03
1ppm+O3.2	X	Inf	9871.8			1.00	1.00	1:25 PM	4/23/03
1ppm+O3.3	X	Inf	9761.8			1.00	1.00	1:29 PM	4/23/03
1ppm+O3.4	X	Inf	9815.8			1.00	1.00	1:33 PM	4/23/03
1ppm+O3.5	X	Inf	9974.7			1.00	1.00	1:37 PM	4/23/03
50ppb+O3.3	X	Inf	332.7	71.52	21.50				
50ppb+O3.1	X	Inf	245.3			1.00	1.00	1:43 PM	4/23/03
50ppb+O3.2	X	Inf	363.7			1.00	1.00	1:47 PM	4/23/03
50ppb+O3.3	X	Inf	270.8			1.00	1.00	1:51 PM	4/23/03
50ppb+O3.4	X	Inf	414.5			1.00	1.00	1:55 PM	4/23/03
50ppb+O3.5	X	Inf	369.2			1.00	1.00	1:59 PM	4/23/03
F-Nozone	X	Inf	963.5	48.85	5.07				
F-Nozone.1	X	Inf	960.1			1.00	1.00	2:29 PM	4/23/03
F-Nozone.2	X	Inf	919.6			1.00	1.00	2:33 PM	4/23/03
F-Nozone.3	X	Inf	917.3			1.00	1.00	2:37 PM	4/23/03
F-Nozone.4	X	Inf	1033.7			1.00	1.00	2:41 PM	4/23/03
F-Nozone.5	X	Inf	986.9			1.00	1.00	2:45 PM	4/23/03
50ppb Nozone	X	Inf	1212.0	127.80	10.54				
50ppb Nozone.1	X	Inf	1133.6			1.00	1.00	2:57 PM	4/23/03
50ppb Nozone.2	X	Inf	1378.7			1.00	1.00	3:01 PM	4/23/03

FIG. 8B

16116

Name	Use S	SConc	SCnts	SSDev	S%RSD	Divider	Multiplier	Time	Date
50ppb Nozone.3	X	Inf	1321.0			1.00	1.00	3:05 PM	4/23/03
50ppb Nozone.4	X	Inf	1107.7			1.00	1.00	3:09 PM	4/23/03
50ppb Nozone.5	X	Inf	1119.1			1.00	1.00	3:13 PM	4/23/03
1ppm-Nozon e	X	Inf	11311.0	83.00	0.73				
1ppm-Nozon e.1	X	Inf	11206.8			1.00	1.00	3:18 PM	4/23/03
1ppm-Nozon e.2	X	Inf	11383.2			1.00	1.00	3:22 PM	4/23/03
1ppm-Nozon e.3	X	Inf	11306.4			1.00	1.00	3:26 PM	4/23/03
1ppm-Nozon e.4	X	Inf	11260.6			1.00	1.00	3:30 PM	4/23/03
1ppm-Nozon e.5	X	Inf	11417.8			1.00	1.00	3:34 PM	4/23/03

FIG. 8C